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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional): P71362US0

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

on _____

Signature _____

Typed or printed name _____

Application Number	Filed
10/586,991	July 21, 2006

First Named Inventor: VORDE

Art Unit	Examiner
1793	Heng M. Chan

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)
- ☑ attorney or agent of record. Registration number 20,851
- ☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____

Signature

Harvey B. Jacobson, Jr.
Typed or printed name

202-638-6666
Telephone number

February 28, 2011
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☑ *Total of 1 forms are submitted.

PATENT
Attorney Docket No. P71362US0

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
Carin Vörde, et al.	)	Confirmation No. 9238
Serial No. 10/586,991	)	Art Unit: 1793
Filed: July 21, 2006	)	Examiner: Heng M. Chan
For: **METHOD OF PRODUCING SALTS OF DINITRAMIDIC ACID**	)	February 28, 2011

PRE-APPEAL BRIEF REQUEST FOR REVIEW

MAIL STOP AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is in response to the Final Rejection mailed August 31 , 2010.

Reconsideration of the outstanding rejections is respectfully requested. Claims 1 and 16-34 are pending.

Rejection over Langlet I in view of Latypov

The Examiner has maintained the rejection of claims 1, 18, 23, 28, and 33-34 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Langlet, et al., U.S. Patent No. 5,976,483 ("Langlet I") in view of Latypov, et al., WO 99/46202 ("Latypov"). The Examiner has

recognized that Langlet I differs from the claimed invention in that "it does not teach adding a guanylurea ion to the reaction mixture to form the salt of guanylurea dinitramide." However, the Examiner asserted that it would have been obvious to cure this deficiency because Latypov allegedly teaches that both guanidinium ion (used by Langlet I) and guanylurea ion (used in the presently claimed invention) "are chemical equivalents to make dinitramide salts." In support of this assertion, the Examiner wrote:

> "[O]n page 2 of the specification, Applicants recognized that guanidineand gunaylurea are functional equivalents [in] that they both provide desirable positive ions to form sparingly soluble ion pair complexes with dinitramide ion."

(Final Rejection, p. 3). With regards to this sentence, Applicants believe the Examiner has reference to the following sentence in the specification: "The basic nitrogen compound can be, for example, different derivatives of guanidine which form salts which are sparingly soluble in water." However, nothing in this sentence (or anywhere else in the specification) teaches or suggests that guanidinium ion of Langlet I and the guanylurea ion of the present invention are "functional equivalents" or "chemical equivalents" when used in the presently claimed process. The specification merely states that different derivatives of guanidine might form sparingly soluble salts, without identifying any in particular (such as guanylurea ion or guanidinium ion). The specification does not state that guanylurea ion and guanidinium ion are functionally equivalent to each other for use in the claimed invention.

Langlet I discloses a process for producing a salt of dinitramidic acid, which starts with an initial reaction mixture with a very low pH, including a nitrating acid, to form

dinitramidic acid (col. 1, lines 52-66). The dinitramidic acid formed in the first step of Langlet I's process is not stable in the acidic environment and the reaction mixture must be neutralized by the addition of a neutralizing agent to the reaction mixture (see, col. 2, lines 21-23, and, col. 1, lines 46-51). The neutralizing agent is added to interrupt the nitration process at an optimal point (col. 2, lines 23-25).

By contrast, in the presently claimed process only guanylurea is added – without a neutralizing agent - and the final product is directly precipitated from the acidic reaction mixture.

A person of skill in the art seeking to modify Langlet I's process would not use guanylurea ion because guanylurea ion is not a neutralizing agent (i.e. a base). As acknowledged by the Examiner on page 3 of the Final Rejection, guanylurea ion is a weak acid, not a base. By contrast, and contrary to the Examiner's assertion, the guanidinium cation identified by Langlet I as potentially being useful as part of a neutralizing agent - $[C(NH_2)_3]^+$ - is basic (i.e. capable of raising the pH of the reaction solution), having a pKa of about 12.5.

The reaction mixture resulting from the nitration step of Langlet I's process is extremely acidic ($pH \leq 0$). According to Langlet I, it is necessary to neutralize that solution to produce the desired final product (col. 1, lines 46-51). Therefore, a person of skill in the art would not have sought to substitute guanylurea ion for guanidinium ion in Langlet I's process because guanylurea ion – which is acidic - would not serve to neutralize the extremely acidic solution from the nitration step of Langlet I's process, regardless of the teachings of Latypov.

As pointed out by the Examiner, Langlet I proposes guanidium ion – or guanidinium ion - as a possible neutralizing agent (col. 3, lines 21-22). Both guanidine and guanidium ion (the cationic form of guanidine) form complex slurries of dissolved salts in the Langlet I reaction mixture, which need further processing in order to extract a solid salt (col. 3, lines 31-49). Nothing in Langlet I teaches or suggests that addition of guanylurea ion to the reaction mixture would produce a useful salt directly precipitated from the acidic solution. Thus, a person of skill in the art would have had no reason to try to use guanylurea ion in Langlet I's process. It was surprising, in fact, that guanylurea provides the unusual and useful results that it does (i.e. producing a solid, easily separable precipitate from an acidic mixture).

Finally, Langlet I is crystal clear that in its process, the final dinitramidic salt is precipitated from a neutral reaction mixture. By contrast, in the presently claimed invention, the guanylurea dinitramide is precipitated directly from an acidic solution. Nothing in either Langlet I or Latypov teaches or suggests this step.

Rejection over Langlet I in view of Latypov and Seyerl

Claims 16-17, 19-22, 24-27, and 29-32 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Langlet I in view of Latypov and Seyerl, U.S. Patent No. 4,559,409 ("Seyerl"). These claims specifically recite the use of cyanoguanidine in the process of the present invention. As discussed above, the process of the presently claimed invention application would not have been obvious over Langlet I in view of Latypov. Nothing

in Seyerl remedies these deficiencies. In particular, cyanoguanidine could not function as a neutralizing agent for the very strongly acidic initial reaction mixture of Langlet I. Thus, a person of skill in the art would not seek to use cyanoguanidine in Langlet I's process.

In view of the foregoing, Applicants respectfully submit that the rejection over Langlet I in view of Latypov and Seyerl should be reconsidered and withdrawn.

Conclusion

In view of the foregoing remarks, it is believed that the claims are now in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided below.

Respectfully submitted,

JACOBSON HOLMAN PLLC

Harvey Jacobson, Jr.
Reg. No. 20,851

400 Seventh Street, N.W.
Washington, D.C. 20004-2201
(202) 638-6666